

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1 – 45. (Cancelled).

46. (Previously presented): A differential for an automotive vehicle, said differential comprising:

a housing containing a bearing seat that is located along an axis; the bearing seat having an internal thread provided with multiple crests;

a carrier that rotates in the housing about the axis for distributing torque to two axle shafts while accommodating for variations in velocity between the axle shafts; and

an antifriction bearing supporting the carrier in the housing, the bearing including an inner raceway carried by the carrier and being presented away from and inclined with respect to the axis;

an outer race located in the bearing seat and having a raceway that is presented inwardly toward the inner raceway and is inclined with respect to the axis in the same direction as is the inner raceway, the outer race having an external thread that is engaged with the internal thread of the bearing seat and a cylindrical surface that lies along multiple crests for the internal thread of the bearing seat, and

rolling elements located between the inner raceway and the outer raceway of the outer race.

47. (Previously presented): A differential according to Claim 46 wherein a clearance fit exists between the crests of the internal thread in the bearing seat and the cylindrical surface of the outer race.

48. (Previously presented): A differential according to Claim 47 wherein the crests of the internal thread in the bearing seat are truncated.

49. (Previously presented): A differential according to Claim 47 wherein the threads on the outer race project outwardly beyond the cylindrical surface on the outer race.

50. (Currently amended): A differential according to Claim 49 wherein the pitch diameter of the internal thread of the bearing seat is slightly greater than the pitch diameter of the external thread on the outer race, whereby a clearance fit exists between the threads.

51. (Currently amended): A differential according to Claim 50 wherein the fit between the cylindrical surface of the outer race and the crests of the internal threads in the bearing seat is equal to or tighter than the clearance fit between the external threads on the outer race and the internal threads of the bearing seat.

52. (Previously presented): A differential according to Claim 46 wherein the inner and outer raceways are tapered and the rolling elements are tapered rollers.

53. (Currently amended): A differential according to Claim 52 wherein the outer race has ends toward which its raceways extend; and wherein the external thread is at the end of the outer race where the tapered outer raceway is smallest and the cylindrical surface is at the end of the outer race where the tapered outer raceway is largest.

54. (Previously presented): A differential according to Claim 52 wherein both the external thread and the cylindrical surface of the outer race surround the outer raceway or the outer race.

55. (Currently amended): A differential for distributing torque between two axle shafts, said differential comprising:

a housing containing bearing seats that are spaced apart along an axis, the bearing seats having internal threads provided with multiple crests;

a differential carrier being configured to deliver torque to the axle shafts;

a ring gear attached to the carrier for delivering torque to the carrier; and

antifriction bearings located within the bearing seats and around the stub shafts for supporting the carrier in the housing and enabling it to rotate about the axis, the bearing within each bearing seat and around the stub shaft in that seat including:

an inner race located around the stub shaft and having a raceway that is presented away from and inclined with respect to the axis;

an outer race that is located within the bearing seat and having an outer raceway that is presented toward the inner raceway and is inclined in the same direction as the inner raceway, the outer race also having an external thread and a cylindrical surface located axially beyond the external thread, the external thread being engaged with the internal thread of the bearing seat so that the axial position of the outer race along the axis may be altered by rotating the outer race in the bearing seat, the cylindrical surface lying along the crests of the internal thread of the bearing seat;

rolling elements located in a row between the inner and outer raceways; and

the bearings being mounted in opposition, whereby rotation of one outer race relative to the other outer race will change the setting of the bearings.

56. (Previously presented): A differential according to Claim 55 wherein the diameters of the cylindrical surfaces of the outer races are less than the diameters of the crests on the internal threads along which they extend.

57. (Previously presented): A differential according to Claim 56 wherein the crests of the internal threads are truncated.

58. (Previously presented): A differential according to claim 56 wherein the external threads on the outer races project radially beyond the cylindrical surfaces of the outer races.

59. (Previously presented): A differential according to Claim 56 wherein the pitch diameter of the internal thread of each bearing seat is slightly greater than the pitch diameter of the external thread on the outer race that threads into that seat.

60. (Currently amended): A differential according to Claim 58 wherein the fit between the cylindrical surface of each outer race and the crests of the internal thread in the bearing seat for that race is equal to or tighter than the fit between the external ~~threads~~ thread on that outer race and the internal ~~threads~~ thread of the bearing seat.

61. (Currently amended): A differential according to Claim 55 wherein the ring gear is beveled; and further comprising a beveled pinion that is rotatable in the housing and is engaged with the beveled ring gear, whereby the axial position of the carrier and the mesh

between the ring gear and the pinion is controlled by rotating the outer races of the bearings in their bearing seats.

62. (Previously presented): A differential according to Claim 55 wherein the raceways of the bearings taper, and the rolling element are tapered rollers.

63. (Previously presented): A differential according to Claim 62 wherein on each outer race both the external thread and the cylindrical surface surround the raceway of the race.

64. (Previously presented): A differential for an automotive vehicle, said differential comprising:

a housing having two spaced apart bearing seats that are aligned along an axis, each bearing seat having an internal thread provided with multiple crests;

a carrier located in the housing generally between the bearing seats and having stub shafts that project into the bearing seats;

a ring gear on the carrier; and

a single row tapered roller bearing supporting the carrier in the housing at each of the stub shafts such that the carrier can rotate about the axis, but is confined axially, each bearing including:

a cup located in the bearing seat for its bearing and having a tapered raceway that is presented inwardly toward the axis, the cup also having an external thread that engages the internal thread of its bearing seat and an external cylindrical surface that lies along the crests of the internal thread of its bearing seat;

a cone located around the stub shaft that projects into the seat and having a tapered raceway that is presented outwardly away from the axis and toward the raceway of the outer race;

and tapered rollers arranged in a single row between the cup and cone and contacting the raceways of the cup and cone;

the bearings being mounted in opposition so that the raceways of the one bearing taper in one direction and the raceways of the other bearing taper in the opposite direction, whereby the setting of the bearings and the axial position of the ring gear can be adjusted by rotating the cups.

65. (Previously presented): A differential according to Claim 64 wherein the diameter of the crests on the internal thread of each bearing seat is greater than the diameter of the cylindrical surface of the cup that fits into the bearing seat.

66. (Previously presented): A differential according to Claim 65 wherein the pitch diameter for the internal thread of each bearing seat is greater than the pitch diameter of the external thread on the cup that is in the bearing seat.

67. (Currently amended): A differential according to Claim 66 wherein the difference between the diameter of the crests on the internal thread and the diameter of the cylindrical surface is equal to or less than the difference between the pitch diameters of the external and internal threads.

68. (Currently amended): A differential according to Claim 66 wherein the fit between the crests of the internal ~~threads~~ thread of each bearing seat and the cylindrical surface

of the cup in that bearing seat is equal to or tighter than the fit between the internal thread of the bearing seat and the external thread of the cup.

69. (Previously presented): A differential according to Claim 65 wherein the crests of the internal thread in each bearing seat are truncated.

70. (Previously presented): A differential according to Claim 64 wherein the bearings are mounted with the large ends of the tapered rollers in the bearings being presented toward each other.

71. (Previously presented): A differential according to Claim 64 wherein each bearing seat includes a half bore in the housing and an initially separate cap covering the half bore, and the internal thread for the bearing seat is in the half bore and in the cap.

72. (Previously presented): A differential according to Claim 64 and further comprising a locking ring attached to each cup and being engageable with the housing to prevent the cup from rotating within the housing.

73. (Currently amended): A differential according to Claim [[62]] 72 wherein the locking ring is a metal stamping, has formations that are engageable by [[the]] a tool, and is deformed into engagement with the housing.

74. (Currently amended): A differential according to Claim 64 wherein the cup of each bearing has a back face at the small end of its raceway, with the back face being located at a substantial ~~angles~~ angle with respect to the raceway of the cup and with respect to the axis; and wherein each bearing further comprises a ring attached to its cup along the back face of the cup,

the ring having at least one formation which enables a tool to engage the ring, so that the tool can rotate the ring and the cup.

75. (New): A differential according to claim 74 wherein the ring is attached to the cup at back face of the cup by means selected from a group consisting of a weld, pins, screws, and an adhesive.

76. (New): A differential according to claim 46 wherein the outer race includes a major element on which the raceway and cylindrical surface of the outer race exist, and a ring that occupies the annular relief of the major element and has the thread of the outer race on it.

77. (New): A differential according to claim 53 wherein the thread occupies between about 33% and 50% of the axial length of the outer race.